Defense Supply Center Philadelphia

...the Philadelphia Solution

Family of Space Heaters (FOSH)

The FOSH heaters have been tested by SSCCOM (Natick) for safe effective use in tents. Field units are able to purchase them by sending requisitions to Defense Supply Center Philadelphia (DSCP). For more information, contact Dan Dilossi, DSN: 444-5190, Tel: (215) 737-5190, or Email: Daniel.Dilossi@dscp.dla.mil.

H-45 Space Heater

Overview:
The H-45 Space Heater is a 45K BTU heater that is designed to provide heat for the General Purpose tents (Small, Medium and Large), TEMPER tents and TOCs. The H-45 heater replaces the antiquated M-41 heater that has severe operational deficiencies and poses a serious safety hazard in the field. The H-45 heater operates without the use of electrical power and can burn all types of liquid fuel (DF-2, DF-1, DF-A, JP-5, JP-8, JP-4, and gasoline) and solid fuel (wood and coal). It utilizes the new vaporizing R-tube burner technology that overcomes the major combustion and safety problems that have existed over the past 50 years in the non-powered heater industry. These problems include poor smoky combustion of diesel fuel and the hazardous exposure of a pool of raw fuel during operation. The new vaporizing R-tube burner technology eliminates these deficiencies while still maintaining simplicity, ruggedness, and low cost.

The NSN for the H-45 heater is 4520-01-329-3451. The cost is around $500 including all accessories.

Description:
The H-45 heater measures 18" diameter × 24" high and weighs 65 lbs, including all accessories (stack, flue cap, gravity feed adapter, hoses, fuel can stand, etc). The H-45 Heater is operational in temperatures ranging from -60° F to 60° F, and can be stored in temperatures ranging from -60° F to 160° F.

Space Heater Arctic (SHA)

Overview:
The Space Heater Arctic (SHA) is a lightweight, portable, multi-fueled, non-powered heater intended to heat five and ten man arctic tents. Provides a maximum heat output of 28K BTU with a high/low adjustment capability. The SHA replaces the current Yukon heater, which has severe operational deficiencies and poses a serious safety hazard in the field. The SHA operates without the use of electrical power and can burn all types of liquid fuel (DF-2, DF-1, DF-A, JP-5, JP-8) and solid fuel (wood and coal). The SHA utilizes the new vaporizing S-tube burner technology that overcomes the major combustion and safety problems that have existed over the past 50 years in the nonpowered heater industry. These problems include poor smoky combustion of diesel fuel and the hazardous exposure of a pool of raw fuel during operation. The new vaporizing S-tube burner technology eliminates these deficiencies while still maintaining simplicity, ruggedness, and low cost.

The NSN for the SHA is 4520-01-444-2375. The cost is around $700 including all accessories.

Description:
The SHA measures 17" H × 9" W × 17" L and weighs 41 lbs, including all accessories. These accessories are comprised of the stack, flue cap, gravity feed adapter, fuel can stand and hoses. All accessory components, including the pre-assembled, telescoping stove pipe, can be stored within the heater making it highly mobile and easy to assemble. The SHA is operational in temperatures ranging from -60° F to 60° F, and can be stored in temperatures ranging from -60° F to 160° F.

Space Heater Convective (SHC)

Overview:
The Space Heater Convective (SHC) is a 35K BTU thermoelectric heater that provides forced hot air circulation in military tentage without the need for an external power supply. This eliminates the need for a field generator. The SHC's intended applications include the Modular Command Post

System, TOCs, and other tents housing expensive electronics equipment. The SHC is the first of its kind to successfully integrate thermoelectrics and combustion into a fieldable heater prototype that delivers clean, breathable heat to military tentage and shelters.

The thermoelectric heater generates its own electrical power (approximately 200 watts) through the use of thermoelectric modules located in the combustion chamber. These modules convert waste heat into electrical energy, which is used to power the blowers, pumps, ignition system, safety system, and control devices required in the operation of the heater. The heater provides a 60% increase in combustion efficiency over currently fielded nonpowered heaters and provides much cleaner combustion of diesel fuel, translating to significantly reduced fuel costs and maintenance requirements.

The NSN for the SHC is 4520-01-431-8927. The cost is around $6800 including all accessories.

Description:
The SHC is 18"H × 14"W × 40"L and weighs 74 pounds. It is operational from -40° F to 60° F, and can be stored from -60° F to 160° F. The heater can be operated either inside or outside the tent and has the capability to burn multiple liquid fuels (DF-2, DF-1, DF-A, JP-5, & JP-8). The heater starts simply using a single switch, and operation is completely automatic due to built in diagnostics, safety and temperature controls. Accessories include remote temperature control box, cable, insulated air ducts, fuel hoses, gravity feed adapter, fuel can stand and spare parts.

Space Heater Small (SHS)

Overview:
The newest addition to FOSH, the Space Heater Small (SHS) is a 12K BTU heater that is designed to provide heat for the Soldier Crew Tent (5-man tent) and other small tentage with floor area between 80 and 100 square feet. The SHS will satisfy a heating requirement for small military tentage in which there is currently no existing heater that can meet this requirement. The SHS operates without the use of electrical power and can burn all types of liquid fuel (DF-2, DF-1, DF-A, JP-5, JP-8). The SHS utilizes the new vaporizing S-tube burner technology which overcomes the major combustion and safety problems that have existed over the past 50 years in the nonpowered heater industry. These problems include poor smoky combustion of diesel fuel and the hazardous exposure of a pool of raw fuel during operation. The new vaporizing S-tube burner technology eliminates these deficiencies while still maintaining simplicity, ruggedness, and low cost.

The NSN for this item is 4520-01-478-9207. The projected cost is around $550.

Description:
The SHS measures 13.7" H × 8.5" W × 16" L and weighs 20 lbs, including all accessories. The integral fuel tank design eliminates the need for hoses, gravity feed adapter, fuel can and fuel can stand. The SHS is operational in temperatures ranging from -60° F to 60° F, and can be stored in temperatures ranging from -60° F to 160° F.

Thermoelectric Fan (TEF)

Overview:
Standard military tent heaters operate inside a tent without the use of external electrical power and transfer heat by means of radiation and natural convection. The heat rises to the top leaving the floor and extremities of the tent cold. This translates into poor habitability conditions and excessive fuel consumption. The Thermoelectric Fan (TEF) operates with standard military tent heaters (SHA and H45) to circulate heated air, improve habitability conditions and significantly reduce fuel usage while generating its own electrical power.

The NSN for this item is 4520-01-457-2790. The price is around $520.

Description:
The TEF is a silent, compact, rugged fan unit (14” in diameter and 10” high) that is placed on top of the standard military tent heaters (H45 and SHA). A built-in thermoelectric module converts heat from the top surface of the heater into electricity to power a 450 CFM fan. The fan moves heated air to the bottom and corners of the tent, providing more even heat distribution throughout the entire shelter. Improved heat distribution delivers more comfortable living/working conditions, improved health and morale, and significant fuel savings for soldiers in the field.

Testing indicates that the TEF can provide an increase of over 20°F at the floor level of the tent. This allows the soldier to operate their heaters at much lower firing rates, saving a significant amount of fuel and increasing comfort levels in the tent. Tests show that up to 50% fuel savings can be achieved. For extreme cold weather conditions this translates into a cost savings of about $450 per season in a 10-Man Arctic Tent and $2,800 per season in a General Purpose Medium (GPM) tent equipped with two heaters and two TEFs.